

IN THE CLAIMS:

1. (Currently Amended) An integrated welder comprising:
  - a. a housing that at least partially contains an internal combustion engine and an electric current generator, said electric current generator at least partially connected to said internal combustion engine to be at least partially driven thereby; and,
  - 5 b. an a portable exhaust gas separator at least partially connected to said internal combustion engine to at least partially receive exhaust gas generated by said internal combustion engine, said exhaust gas separator at least partially separating a shielding gas from said exhaust gas to at least partially be used as a shielding gas for an ongoing arc welding procedure.
2. (Original) The welder as defined in claim 1, wherein said exhaust gas separator is at least partially housed in said housing.
3. (Original) The welder as defined in claim 1, wherein said exhaust gas separator is at least partially powered by the current generated by said electric current generator.
4. (Original) The welder as defined in claim 3, including an electric circuit that controls power to said exhaust gas separator.
5. (Original) The welder as defined in claim 1, wherein said exhaust gas separator at least partially separates liquids from said exhaust gas.

6. (Original) The welder as defined in claim 5, wherein said exhaust gas separator includes a condenser.

7. (Original) The welder as defined in claim 1, wherein said exhaust gas separator includes a gas filter.

8. (Currently Amended) The welder as defined in claim 1, wherein said shielding gas includes at least a majority weight percent of carbon dioxide.

9. (Original) The welder as defined in claim 1, including a gas compressor to at least partially compress said shielding gas from said exhaust gas separator.

10. (Original) The welder as defined in claim 9, wherein said gas compressor is at least partially powered by the current generated by said electric current generator.

11. (Original) The welder as defined in claim 10, including an electric circuit that controls power to said electric current generator.

12. (Original) The welder as defined in claim 9, including a gas cylinder fluidly connected to said air compressor.

13. (Original) The welder as defined in claim 12, including a pressure monitor to monitor a pressure in said gas cylinder to generate a control signal to activate or deactivate said air

compressor based at least partially on a detected air pressure level in said gas cylinder.

14. (Original) The welder as defined in claim 1, wherein said housing includes wheels to enable said housing to be rolled over a ground surface.

15. (Currently Amended) The welder as defined in claim 1, including a welding circuit that is designed to provide sufficient voltage and current to a workpiece to cause an electric arc to form between a consumable electrode and said workpiece, said welding circuit at least partially controlling at least one welding parameter between said consumable electrode and said workpiece, said welding parameter includes a parameter selected from the group consisting of voltage, current, energy, power, polarity, current wave form, and or combinations thereof.

16. (Original) The welder as defined in claim 15, wherein said consumable electrode is a consumable flux cored metal electrode.

17. (Currently Amended) An A portable exhaust gas separator designed to be connected to an exhaust of an a portable internal combustion engine to produce a shielding gas for use in an ongoing welding operation comprising:

- a. a liquid separating mechanism designed to remove a majority of water and water vapor from an exhaust gas generated by the internal combustion engine; and,
- b. a gas separating mechanism to separate a majority of an arc welding shielding gas from the exhaust gas, said arc welding shielding gas including a gas selected from the group consisting of carbon dioxide, carbon monoxide and or combinations thereof.

18. (Currently Amended) The exhaust gas separator as defined in claim 17, wherein said portable exhaust gas separator is releasably connectable to the internal combustion engine.

19. (Currently Amended) The exhaust gas separator as defined in claim 17, wherein said liquid separating mechanism includes a condenser, a dehumidifier, coalescing filters filter, particulate filters filter, and or combinations thereof.

20. (Currently Amended) The exhaust gas separator as defined in claim 17, wherein said gas separating mechanism includes a gas filter, a scrubber, a gas absorber, a gas adsorber, and or combinations thereof.

21. (Original) The exhaust gas separator as defined in claim 17, including a gas compressor to at least partially compress said shielding gas.

22. (Currently Amended) A method of generating a shielding gas for use in an ongoing arc welding process from an exhaust gas of an internal combustion engine comprising:

- a. providing an exhaust gas from an a portable internal combustion engine;
- b. providing a portable gas and liquid separator and;
- c. removing at least a majority of water and water vapor from said exhaust gas by said portable gas and liquid separator; and,
- d. separating at least a majority of said shielding gas from said exhaust gas by said portable gas and liquid separator, said shielding gas including a gas selected from the group consisting of carbon dioxide, carbon monoxide and or mixtures thereof.

23. (Original) The method as defined in claim 22, including the step of compressing said shielding gas.

24. (Currently Amended) The method as defined in claim 22, wherein said portable internal combustion engine and said portable gas and liquid separator are components of an engine welder.

25. (New) An integrated portable arc welder comprising:

a. a housing that at least partially contains an internal combustion engine, an electric current generator and a welding circuit, said electric current generator at least partially connected to said internal combustion engine to be at least partially driven thereby, said welding circuit forming an arc welding current during an arc welding process from current generated by said electric generator; and,

b. a portable exhaust gas separator at least partially connected to said internal combustion engine to at least partially receive exhaust gas generated by said internal combustion engine during the operation of said internal combustion engine, said exhaust gas separator at least partially removing liquid from said exhaust gas and at least partially separating a shielding gas from said exhaust gas, said exhaust gas separator including a condenser and a gas filter, said shielding gas at least partially used during said arc welding process to at least partially shield a weld metal formed during said arc welding process, said shielding gas includes a majority weight percent of carbon dioxide.

26. (New) The portable welder as defined in claim 25, wherein said portable exhaust gas

separator is at least partially contained in said housing.

27. (New) The portable welder as defined in claim 25, wherein said portable exhaust gas separator is at least partially powered by said current generated by said electric current generator.

28. (New) The portable welder as defined in claim 26, wherein said portable exhaust gas separator is at least partially powered by said current generated by said electric current generator.

Rule  
126

~~31.~~ 29. (New) The portable welder as defined in claim 25, wherein said portable exhaust gas separator includes a gas compressor to at least partially compress said shielding gas, said gas compressor is at least partially powered by said current generated by said electric current generator.

~~32.~~ 30 (New) The portable welder as defined in claim 28, wherein said portable exhaust gas separator includes a gas compressor to at least partially compress said shielding gas, said gas compressor is at least partially powered by said current generated by said electric current generator.

~~33.~~ 31. (New) The portable welder as defined in claim ~~31~~, including a gas cylinder fluidly connected to said air compressor and a pressure monitor to monitor a pressure in said gas cylinder, said pressure monitor designed to generate a control signal to activate or deactivate said air compressor based at least partially on a detected air pressure level in said gas cylinder.

~~32.~~ 34. (New) The portable welder as defined in claim ~~32~~, including a gas cylinder fluidly connected to said air compressor and a pressure monitor to monitor a pressure in said gas cylinder,

said pressure monitor designed to generate a control signal to activate or deactivate said air compressor based at least partially on a detected air pressure level in said gas cylinder.

35.33 (New) The portable welder as defined in claim 25, including a welding circuit that is designed to provide sufficient voltage and current to a workpiece to cause an electric arc to form between a consumable electrode and said workpiece, said welding circuit at least partially controlling at least one welding parameter between said consumable electrode and said workpiece, said welding parameter includes a parameter selected from the group consisting of voltage, current, energy, power, polarity, current wave form or combinations thereof.

36.34 (New) The portable welder as defined in claim 34, including a welding circuit that is designed to provide sufficient voltage and current to a workpiece to cause an electric arc to form between a consumable electrode and said workpiece, said welding circuit at least partially controlling at least one welding parameter between said consumable electrode and said workpiece, said welding parameter includes a parameter selected from the group consisting of voltage, current, energy, power, polarity, current wave form or combinations thereof.

36.35 (New) A portable exhaust gas separator designed to be connected to an exhaust of a portable internal combustion engine of an electric arc welder to produce a shielding gas for use in an ongoing welding operation comprising:

a. a liquid separating mechanism designed to remove a majority of water and water vapor from an exhaust gas generated by said internal combustion engine, said liquid separating mechanism including a condenser, a dehumidifier, a coalescing filter, a particulate filter or

combinations thereof;

b. a gas separating mechanism to separate an arc welding shielding gas from the exhaust gas, a majority of said arc welding shielding gas including a gas selected from the group consisting of carbon dioxide, carbon monoxide or combinations thereof, said gas separating mechanism including a gas filter, a scrubber, a gas absorber, a gas adsorber or combinations thereof; and,

c) a shielding gas compressor to at least partially compress said shielding gas.

35

37.36 (New) The portable exhaust gas separator as defined in claim 36, wherein said portable exhaust gas separator is releasably connectable to said internal combustion engine.

38.37 (New) A method of generating a shielding gas for use in an ongoing arc welding process from an exhaust gas of an internal combustion engine of a portable electric arc welder comprising:

- a. generating an exhaust gas from an exhaust of said internal combustion engine during the operation of said electric arc welder;
- b. connecting a portable gas and liquid separator to said exhaust of said internal combustion engine;
- c. removing at least a majority of water and water vapor from said exhaust gas by said portable gas and liquid separator;
- d. separating said shielding gas from said exhaust gas by said portable gas and liquid separator, said shielding gas including a gas selected from the group consisting of carbon dioxide, carbon monoxide or mixtures thereof; and,

e. supplying at least a portion of said shielding gas during said ongoing arc welding process to at least partially shield a weld metal formed during said arc welding process.

37

39. 38. (New) The method as defined in claim 38, wherein said portable gas and liquid separator are components of said electric arc welder.

37

40. 39 (New) The method as defined in claim 38, wherein said portable gas and liquid separator is at least partially powered by current generated by said electric arc welder.

38

41. 40. (New) The method as defined in claim 39, wherein said portable gas and liquid separator is at least partially powered by current generated by said electric arc welder.